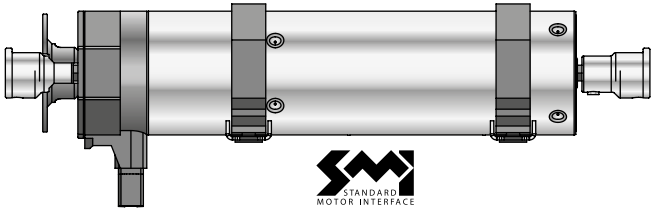
GEIGER Antriebstechnik

Venetian blind motor:

GEIGER GJ56.. E07 SMI

For Venetian blinds



EN **Original assembly and operating instructions** **EN**

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1. General information

Dear customer,

By purchasing a GEIGER motor you have decided on a quality product from GEIGER.

Thank you very much for your decision and the confidence placed in us.

Before you put this drive into operation please observe the following safety instructions. It serves for the prevention of danger and for the avoidance of personal injury and damage to property.

The installation and operating instructions contain important information for the installer, the specialist electrician and the user. Please pass on these instructions if you transfer the product. These instructions should be kept by the user.

2. Guarantee

In the case of incorrect installation contrary to the installation and operating instructions and/ or constructional modification, the legal and contractual guarantee for property damage and product liability lapses.

3. Intended use

The motors of the model range **GJ56.. E07 SMI** with electronic end stop are designed exclusively for the operation of Venetian blinds.

The motors may not be used for the operation of roller grilles, garage doors, furniture and lifting tools.

GJ 56 xx x

- **x** – Design options
- **xx** – Torque in Nm
- **56** – For head rails at least 56 mm
- **GJ** – GEIGER Venetian blinds motor

4. Safety instructions

ATTENTION: Important safety instructions. For personal safety, it is important to follow these instructions. Please keep these instructions for future reference.

- **Do not allow children to play with stationary controls. Keep remote controls away from children.**
- **The installation is to be checked regularly for defective balance, signs of wear or damaged cables and springs, if relevant.**
- **Do observe the moving sun protection system and keep persons away until it has closed completely.**
- **When operating the manual release with the sun protection system open, please be cautious as it can fall down quickly if springs or tapes wear off or are broken.**
- **Do not operate the device if operations such as, for example, window cleaning are to be carried out in the vicinity.**
- **Disconnect the automatic controlled device from the mains power supply if operations such as, for example, window cleaning are being carried out in the vicinity.**
- **During operation observe the danger zone.**
- **Do not use the installation if people or objects are in the danger zone.**
- **Urgently shut down damaged installations until repair.**
- **Unconditionally shut down the unit during maintenance and cleaning operations.**
- **Pinching and shearing points are to be avoided and must be secured.**
- **This appliance can be used by children aged 8 and above and persons whose physical, sensorial or mental capacities are impaired, or who have no experience or know-how if they have been supervised or been given instructions on the use of the appliance and if they understand the possible resulting dangers. Children are not permitted to play with the device. Cleaning and maintenance should not be carried out by children.**
- **The rated sound pressure level is less than 70 dB(A).**
- **Disconnect the device from the mains power supply for maintenance and replacement of parts.**
  If the motor is disconnected via a plug connection the operator must be able to control - from any place to which it has access – that the plug is removed.
  If this is not possible - due to design or installation - the disconnection from the power supply must be ensured via locking in the disconnected position (e.g. isolator).
- **The motor tube can get very hot during prolonged use.**
  When working on the unit, do not touch the tube before it has cooled down.

5. Safety instructions for assembly

ATTENTION: Important safety instructions. Follow all installation instructions, as incorrect installation can lead to serious injuries.

- **When mounting the motor without any mechanical protection of the driven parts and of the tube which may become hot, the motor must be installed at a height of at least 2.5 m above the ground or of another level which provides access to the drive.**

- **Before the motor is installed, all cables which are not needed are to be removed and all equipment which is not needed for power-operated actuation is to be put out of operation.**
- **The actuating element of a manual release must be mounted at a height of less than 1.8 m.**
- **If the motor is controlled by a switch or pushbutton, the switch or pushbutton must be mounted within eyeshot of the motor. The switch or pushbutton must not be located in the vicinity of moving parts. The height of installation must be at least 1.5 m above the floor.**
- **Permanently installed control devices must be attached visibly.**
- **In case of devices extending horizontally, a horizontal distance of at least 0.4 m must be respected between the fully extended part and any other fixed element.**
- **The rated speed and the rated torque of the motor must be compatible with the device.**
- **The mounting accessories that are used must be designed in accordance with the selected rated torque.**
- **Good technical knowledge and good mechanical skills are necessary for the motor installation. Incorrect installation can lead to serious injury.**
  Electrical work must be carried out by a qualified electrician in accordance with the regulations in force locally.
- **Only use connecting cables that are suitable with the environmental conditions and which meet the construction requirements. (see accessories catalogue)**
- **If the device is not equipped with a connecting cable and a plug, or other means for disconnecting from the mains with a contact opening on each pole according to the conditions of the overvoltage category III for full disconnection, a disconnecting device of this type must be incorporated into the permanently installed electrical installation according to the wiring rules.**
- **Do not mount the connecting cables near hot surfaces.**
- **A plug for the disconnection of the motor from the power supply must be accessible after installation.**
- **Damaged connecting cables must be replaced by GEIGER connecting cables of the same type.**
- **The device must be mounted as described in the installation instructions. Fixations shall not be made with adhesives since they are regarded as unreliable.**

6. Identification number

Four removable ID stickers are applied on the connecting cable of the motor **GJ56.. E07 SMI**. The printed number SMI-KEY-ID clearly identifies the motor in the bus system.

The stickers and / or the connecting cable must not be interchanged.

The stickers are useful if you want to note the installation location for a later bus integration of each motor (see “for your notes”).

7. Assembly note

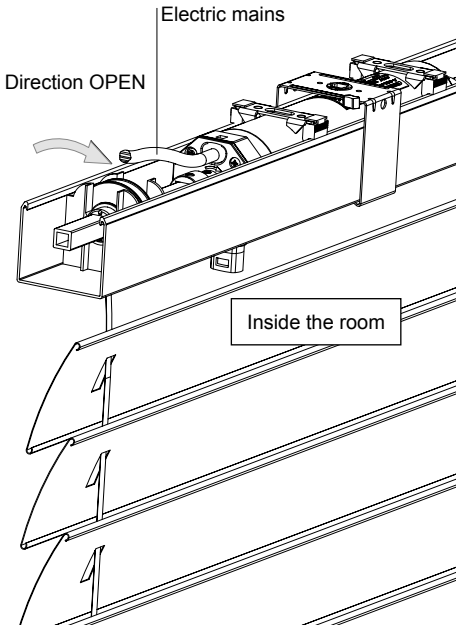
When viewed from inside the room, the power supply connection of the **GJ56.. E07 SMI** is located on the left side. The straps are wound on the winding rollers from the outside.

The **GJ56.. E07 SMI** must be installed in alignment with the turning bars.

It is important that the **GJ56.. E07 SMI** is installed centrally. Please make sure that the load is evenly distributed.

Inclined installation:

The inclined installation is permitted till 45° maximum to level.



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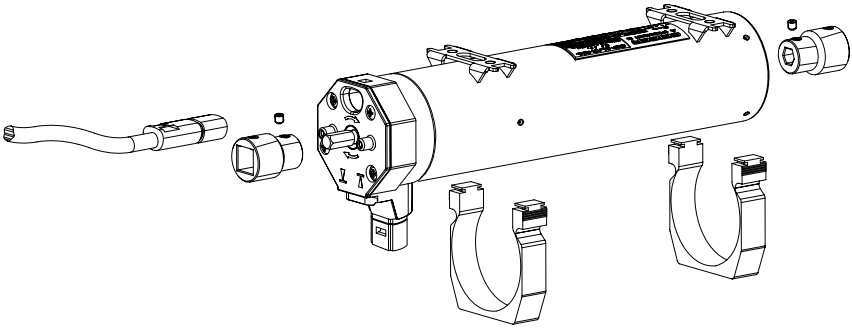
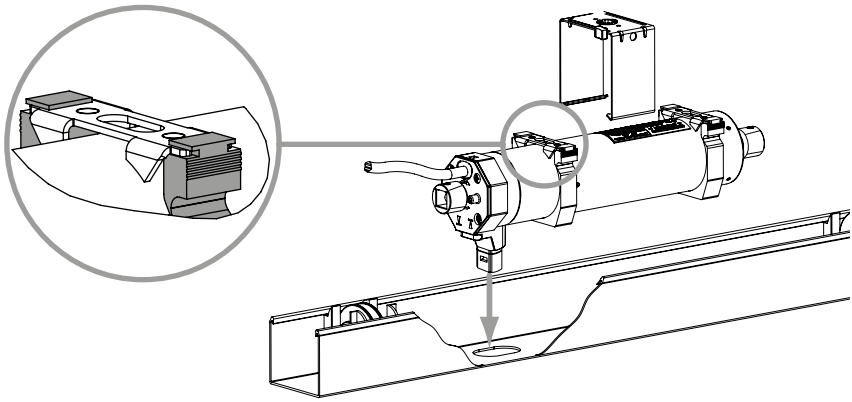
8. Installation instructions

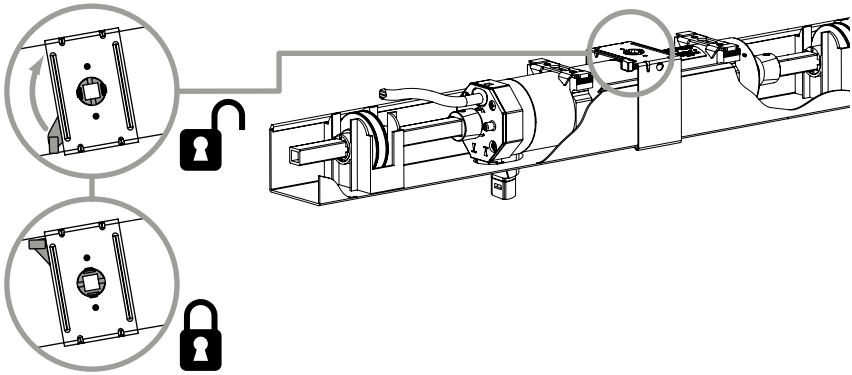
Prior to installation please check to ensure there is no visible damage to the motor like cracks or open cables.

Before fixing please check the strength of the masonry and of the surface.

Head rail opening at top:







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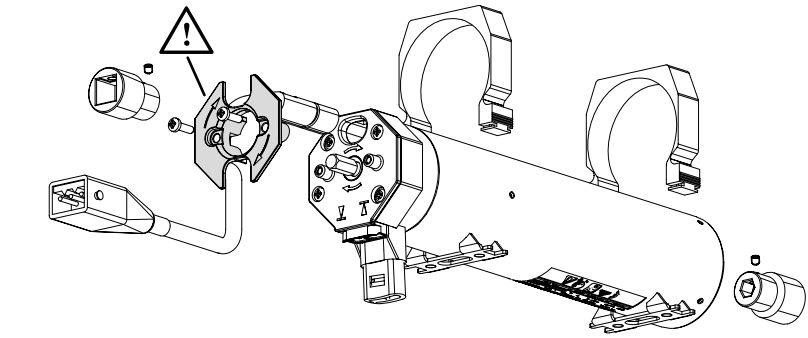
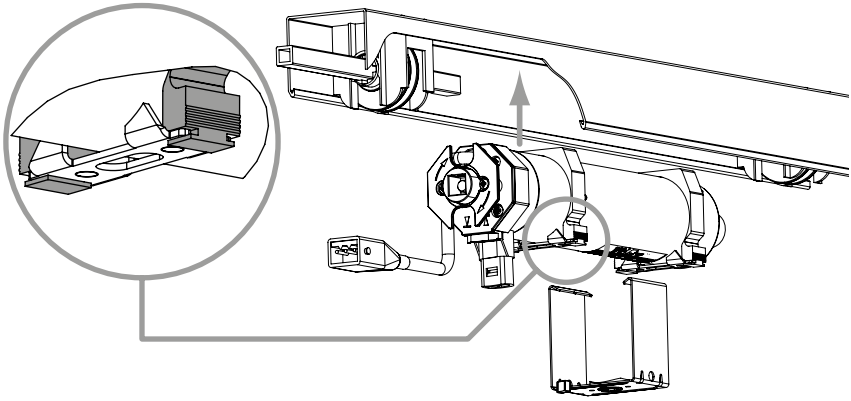
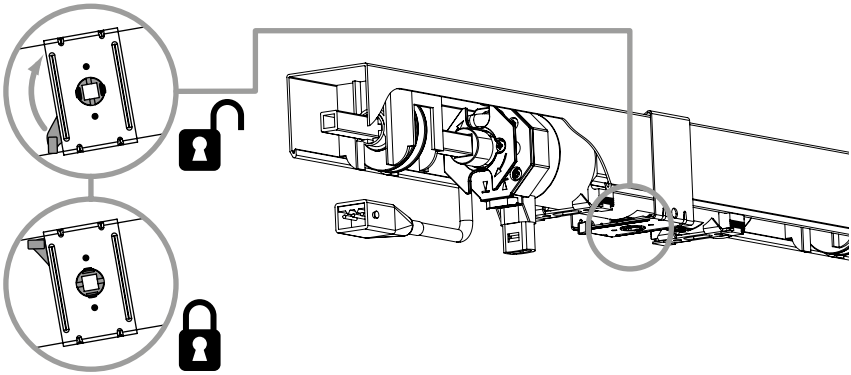
Head rail opening at bottom:







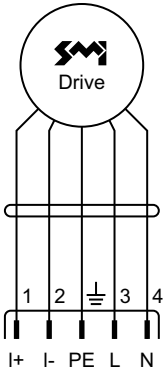
9. Information for the specialist electrician

Caution: Important installation instructions. Please follow all installation instructions since incorrect installation can lead to the destruction of the motor and the switching unit.

The motor can only be operated with SMI certified actuators.

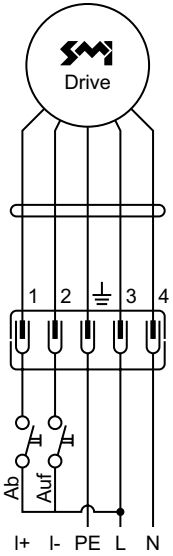
- A locking switch is here necessary (no simultaneous UP and DOWN commands).
- The operations with the service clamps may be accomplished only by an electrical specialist.
- Motors with electronic limit stops can be connected in parallel. Please observe the instructions of the actuator manufacturer.
- In this case the maximum load of the switching unit must not be exceeded.
- When changing the running direction the switchover must be effected through an off-position.
- When changing the running direction the switchover time must be at least 0.2 s.
- Connecting cables with plug connectors of the Hirschmann Company are tested and approved with couplings of the Hirschmann Company.
- A 5-pole connecting cable with continuous power supply must be used for SMI motors. (GEIGER Flat5 with dark blue ring)
- In order to prevent a malfunction caused by coupling, the supply line (ref. NYM) from the actuator/switch to the motor must not exceed 100m in case of motors with electronic end stops.

10. Conductor assignment for SMI drives for mains voltage

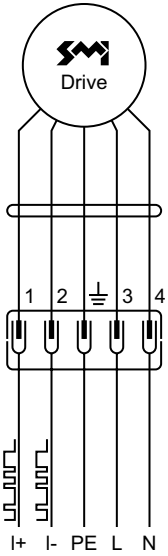


I+: Control wire +
I-: Control wire -
PE: Protective earth conductor
L: Live
N: Neutral wire

Names



Push button operation



Telegram operation

Connector on drive cables	The STAS4 connector from Hirschmann is recommended.		
Cable connections and connector assignment for the STAS4/STAK4 connection system with **cables having black, grey, brown, blue and yellow-green wires**	STAS 4 / STAK 4	Wire colour	Name
	1 2 3 4 5 (PE)	black grey brown blue green-yellow	I+ I- L N PE
Cable connections and connector assignment for the STAS4/STAK4 connector system with **cables having 2 black wires**	STAS 4 / STAK 4	Wire colour	Name
	1 2 3 4 5 (PE)	black 1 black 2 brown blue green-yellow	I+ I- L N PE
	Definition of the black wires: black 1: between blue and green-yellow black 2: between brown and green-yellow		
Note on laying SMI wires in custom cables	The I+ and I- SMI wires can be laid in the motor connection line of the SMI drive (as above) or in their own cable. It is not permitted to lay SMI wires together with wires carrying other signals in one cable. If SMI drives wired in parallel are supplied with electrical power from different phases, the SMI I+ and I- wires must be laid in a separate cable.		

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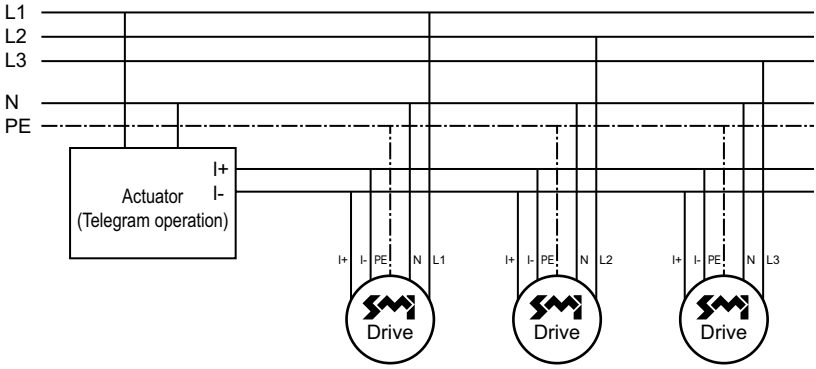
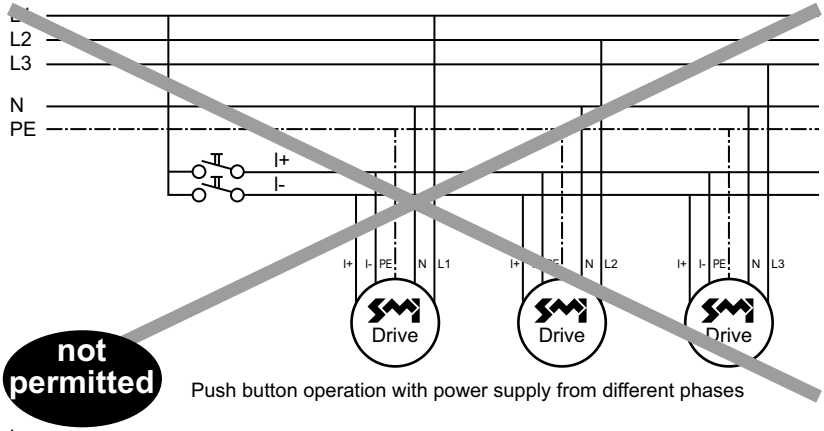
11. SMI drives on different AC phases

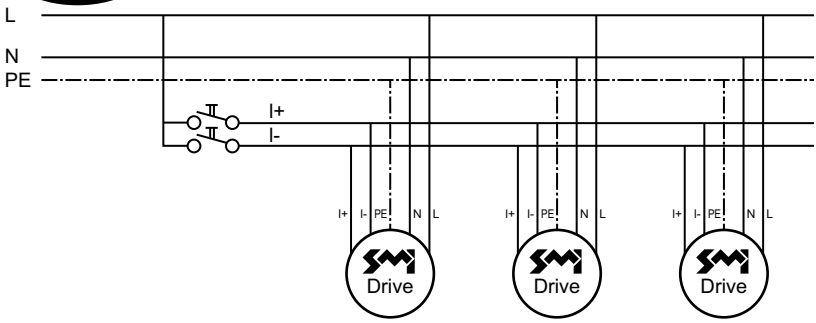
Parallel connection to the control lines I+ and I- while supplying power to the drives from different phases, is only permissible in telegram operating mode.



permitted Telegram operation with power supply from different phases



not permitted Push button operation with power supply from different phases



permitted Push button operation with power supply from one phase

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12. For your notes …

SMI-KEY-ID (sticker)	**Place of installation** e.g.: 1st floor, left side, third room, 1st window etc.

13. Setting of the end stops

General information

In order to set the end positions of the **GJ56.. E07 SMI** motors, any setting switch can be used that has a programming key or that allows a simultaneous UP/DOWN command. In this case, the UP/DOWN keys must be activated simultaneously instead of the programming key.

The motor can also be operated with the limit stop switch and a standard switch.

Article number / GEIGER setting switch	
M56F152	with service terminal (D), 5 wires, SMI compatible
M56F153	with service terminal (CH), 5 wires, SMI compatible

Important: please observe the connecting diagram on the back of the setting switch.

Factory setting

- The motor is set on the lower end position at the factory. The upper end stop is at the very other end. (at least lower end stop + 200 motor rotations).
- The motor command is in normal operation.
- The referencing is enabled on delivery.

Note: If the motor is installed in a closed Venetian blind and if the limit stop switch is used the motor can be operated without further settings.

If the factory setting has been carried out and if the programming mode is activated, max. 100 revolutions can be done downwards. Reset to factory settings for a further run downwards.

14. Activate the programming mode

Prerequisite: The motor is positioned between the upper and the lower end position. The limit stop switch should not be pressed.

The GJ56.. E07 SMI can be set with any setting switch that permits a simultaneous UP/DOWN command. In this case, the UP/DOWN keys must be simultaneously pressed instead of the programming key.

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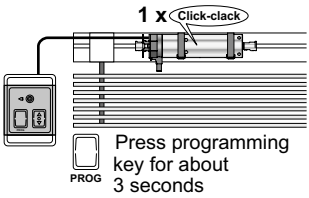
Activate the programming mode via limit stop switch

Press the programming key of the limit stop switch or the UP/DOWN keys simultaneously until, after about 3 seconds, the motor confirms “end position programming activated” with 1 x click-clack. Then release the key.

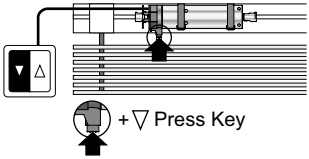


Activate the programming mode on the motor *

Press the limit stop switch and also press the DOWN key on the locked Venetian blind switch.

The motor moves for 1 second.

Keep both keys pressed for another 3 seconds. The motor confirms with a short movement downwards.

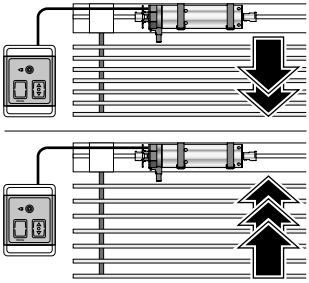


* The motor must be connected according to the diagram “push button operation” (see point 10).

15. Programming/changing the end stops

The upper and lower end stops can be programmed and changed independently of each other.

- Activate the programming mode.
- Run the motor in the direction of the desired end position. The motor interrupts its run just to show that it is in the programming mode:
- The direction in which the motor moves after the break* determines the end stop to be programmed. (UP = upper end stop, DOWN = lower end stop)
- When the desired end position is reached, move the motor in the opposite direction until 2 short breaks* show the last saved position.
- The programming is completed.



** As long as the interruption of movement has not yet occurred, corrections can be done.*

Start the setting process again to adjust another end position.

The referencing is automatically activated if the upper end position is programmed.

Limit stop switch instead of upper end position

- If the direction UP should be turned off by the limit stop switch, there is no need to program the upper end stop. The blind moves every time against the limit stop switch.
- If an upper end position is already programmed and you now want to switch off with the limit stop switch, the programming mode must be activated and the blind moved against the limit stop switch. The lower end position is unchanged and the programming is completed.
- The motor is now always turned off by the limit stop switch.

Cancel the programming mode:

In order to cancel the programming mode, press the programming keys (programming key/UP/DOWN keys/limit stop switch and DOWN key) until the motor confirms the cancellation of the programming mode after about 3 seconds with 2 x click-clack.

16. Referencing on the limit stop switch

The referencing on the limit stop switch can compensate a possible drifting of the upper end position due to the modified winding behaviour of the lifting tapes.

If the referencing has been activated (see below), the next UP run is done till the limit stop switch.

The variation in distance between the upper limit position and the limit stop switch is stored.

After 5, 20 and then every 50 cycles on the upper end stop, the motor runs against the limit stop switch in order to test if the variations in distance have changed. If this is the case, the upper end position is readjusted.

The motor stops on the limit stop switch by the reference runs.

17. Enable/disable reference cycles

The referencing is enabled on delivery. The referencing can be enabled only if the upper end position is set on position.

Switching on/off referencing:

Press the programming keys (programming key/UP/DOWN keys/limit stop switch and DOWN key) between 6 and 9 seconds until the motor jerks 1 x after about 3 seconds and another time after 6 seconds for feedback “Switching on/off referencing”.

A subsequent UP command with 1 x jerking enables the referencing, a DOWN command with 2 x jerking disables it.

18. Resetting to factory settings

Press the programming keys (programming key/UP/DOWN keys/limit stop switch and DOWN key) about 10 seconds until the motor jerks 1 x after 3 seconds, 1 x after 6 seconds and 4 x after 10 seconds. Then the motor is reset to factory settings and the referencing is activated.

19. Obstacle detection and anti-freeze protection

For an optimal operation of the obstacle detection function, move the blind from bottom to top without interruption, after the programming has been completed.

After an obstacle detection (e.g. obstacle or blind frozen to the window sill), the UP direction is blocked.

A short command in the DOWN direction releases the UP direction.

20. What to do if…

Problem	Solution
Motor does not run.	• Motor not plugged in. Please check the plug connection. • Check connecting cable for possible damage. • Check the mains voltage and allow the cause of the voltage breakdown to be tested by a specialist electrician.
Instead of in the upwards direction, motor runs downwards.	• The control leads are interchanged. Exchange black/brown control leads.
Motor only runs in one direction.	• Motor in the end position. Run motor in the opposite direction. Readjust the end positions, if necessary.
After running several times, the motor breaks down and no longer responds.	• The motor became too hot and has switched off. Try it again after a cooling time of about 15 min.
The blind is in the upper position, actuates the limit stop switch and can no longer be moved downwards.	• The motor was installed upside down or the lower end position has been overrun and the lift tapes were wound up incorrectly. Allow free mobility of the limit stop switch. Reset the end stops.

21. Declaration of conformity

GEIGER
Antriebstechnik

EC Declaration of Conformity

Gerhard Geiger GmbH & Co. KG
Antriebstechnik
Schleifmühle 6

D-74321 Bietigheim-Bissingen

Product: Venetian blind motor, motor for rolling shutter, motor for awnings

Type designation: **GJ56..**

GR45..

GU45..

The designated product is in conformity with the European Directive:

2006/42/EC

"Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 for the approximation of laws, regulations and administrative provisions of the Member States concerning machinery".

2004/108/EC

"Directive 2004/108/EC of the European Parliament and of the Council of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC"

The conformity of the designated product with the provisions of the directives is proved in particular by full compliance with the following standards:

DIN EN 60335-1	DIN EN 55014-1	EN301 489-03
DIN EN 60335-2-97	DIN EN 55014-2	EN300 220-3
DIN EN 62233	DIN EN 61000-3-2	
	DIN EN 61000-3-3	

The accredited VDE Testing and Certification Institute (EU Identification No. 0366) Merianstr. 28, D-63069 Offenbach, tests and certifies for the company Gerhard Geiger GmbH & Co. KG.

Authorised representative for technical data: Gerhard Geiger GmbH & Co. KG
Address: Schleifmühle 6, D-74321 Bietigheim-Bissingen

Bietigheim-Bissingen, 15.02.2013 Hans-Michael Dangel (General Manager)

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22. Maintenance

The drive is maintenance-free.

23. Technical data

Technical data GJ56.. E07 with electronic end stop					
	GJ5603k	**GJ5606k**	**GJ5606[1)]**	**GJ5610**	**GJ5620**
Voltage			230 V~/50 Hz		
Current	0,40 A	0,40 A	0,40 A	0,60 A	0,85 A
Cos Phi (cosφ)			> 0,95		
Inrush current (factor)			x 1,2		
Power	90 W	93 W	90 W	135 W	190 W
Torque	3 Nm	6 Nm	6 Nm	10 Nm	2 x 10 Nm
Speed			26 1/min		
Protection class			IP 54		
Limit switch range			200 rotations		
Operating mode	S2 4 min.	S2 4 min.	S2 6 min.	S2 4 min.	S2 4 min.
Length	319,5 mm	319,5 mm	324,5 mm	329,5 mm	356,7 mm
Diameter			55 mm		
Weight	approx. 1,50 kg	approx. 1,50 kg	approx. 1,60 kg	approx. 1,70 kg	approx. 2,20 kg
Ambient temperature / humidity	Operation: T = -10°C .. +60°C / H max. 90% Storage : T = -15°C .. +70°C / dry and non-condensing place				

[1)] Run-time optimized version

Subject to technical modifications

24. Notes on waste disposal

Recycling of packaging materials

In the interest of environmental protection, please contact your local government's recycling or solid waste management department to learn more about the services it provides.

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Waste disposal of electric and electronic equipment

Electrical and electronic equipment must be collected and disposed of separately in accordance with EU regulations.

For technical questions, please call our service team at: +49 (0) 7142 938-333. They will be happy to assist you.

GEIGER Antriebstechnik

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